APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,573	02/08/2002	Manabu Kitamura	16869S-042600US	1947

			EXAMINER
20350	7590	09/22/2005	PATEL, ASHOKKUMAR B

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ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="2">Office Action Summary</td><td colspan="2">Application No.</td><td colspan="2">Applicant(s)</td></tr>
<tr><td colspan="2">10/072,573</td><td colspan="2">KITAMURA ET AL.</td></tr>
<tr><td></td><td>Examiner</td><td></td><td>Art Unit</td><td></td></tr>
<tr><td></td><td>Ashok B. Patel</td><td></td><td>2154</td><td></td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 July 2005</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-7</u> is/are pending in the application.

     4a) Of the above claim(s) <u>2 and 7</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1 and 3-6</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 7-05)   Office Action Summary   Part of Paper No./Mail Date 20050914

DETAILED ACTION

1.   Claims 1, and 3-6 are subject to examination. Claims 2 and 7 are cancelled.

Response to Arguments

2.   Applicant's arguments with respect to claims 1 and 3-6 have been considered but
are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made to
> a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

4.   Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable
over in view of Padovano (US 6, 606, 690) in view of Baldwin et al. (US 2003/0167327
A1) (hereinafter Baldwin).

Referring to claim 1,

Padovano teaches a computer system configured of a plurality of computers (Fig. 2,
element 102-106, 202-206), a plurality of storage subsystems (Fig. 3B, elements 302
(SAN Server), 304 (NAS server)), and a storage management computer (Fig. 4,
element 412), comprising:

said plurality of computers having means for transmitting an input/output request
and input/output data between said computers and said storage subsystems through at
least one of a first physical communication medium (Fig. 2, element 208, col.4, line 65-

col. 5, line 10) and a second physical communication medium (Fig. 2, element 116, col.4, line 65- col. 5, line 10), both of which interconnect said computers with said storage subsystems (Fig. 3, col. 13, line 3-10); and

said plurality of storage subsystems including first storage device to be accessed by said plurality of computers according to a first input/output access protocol of computers according to a first input/output access protocol (col. 13, line 11-18) and second storage devices to be accessed by said plurality of computers according to a second input/output access protocol (col. 13, line 47-62); and

said storage management computer connected with said storage subsystems through said first and second physical communication mediums and having, a display apparatus (Figs. 2, 3B, 4 and element 412).

Padovano does not explicitly teach a physical view display means for displaying physical connecting relation on said display apparatus in one of (a) a first display mode of displaying said computers and said storage subsystems interconnected through said first physical communication medium and their connecting relation (topology), (b) a second display mode of displaying said computers and said storage subsystems interconnected through said second physical communication medium and their connecting relation (topology), and (c) a third mode of displaying the physical connecting relation both of said first and second display modes at a time

a logical view display mans for displaying logical connecting relation on said display apparatus in one of (d) a fourth display mode for displaying said computers. said first storage devices and their topology, and (e) a fifth display mode for displaying said

computers. said second storage devices and their topology, (f) a sixth mode of displaying the logical connecting relation both of said third and fourth display modes at a time. (g) a seventh display mode for displaying unused storage device, and (h) an eighth display mode for displaying connection between said computers and said first and second storage devices under access limitation. And means for allowing a user to select one of said first to eighth display modes.

Baldwin teaches a physical view display means for displaying physical connecting relation on said display apparatus in one of a display mode of displaying said computers and said storage subsystems interconnected through said communication medium and their connecting relation (topology), and a mode of displaying the physical connecting relation of display modes at a time (Abstract, Figs. 28-32, para.[0491]-[0499]).

Baldwin also teaches a logical view display mans for displaying logical connecting relation on said display apparatus in one of a display mode for displaying said computers. said storage devices and their topology, and a mode of displaying the logical connecting relation of display modes at a time and a display mode for displaying unused storage device, and a display mode for displaying connection between said computers and said storage devices under access limitation, and means for allowing a user to select one of said first to eighth display modes. (Abstract, para.[0022]-[0028])

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Padovano by adding the capabilities of Baldwin such that the network's physical and logical relationships are displayed as

claimed as it facilitates access to multiple storage devices, e.g., of varied types, from a plurality of servers or other host digital data processors, e.g., running a variety of platforms (different protocols and physical mediums as Padovano employs NAS and SAN) and provides an apparatus for managing administrator-defined and other policies for storage networks, e.g., to facilitate access by multiple hosts to multiple storage devices in a manner consistent with network administrators' wishes and without risk of unwanted access conflicts as taught by Baldwin.

Referring to claim 3,

Padovano teaches a computer system as claimed in claim 1, wherein said first input/output access protocol is a fixed-length block access protocol (Fig. 3, element SAN server) and said second access protocol is a file access protocol. (Fig. 3, element NAS server).

Referring to claim 4,

Padovano teaches a computer system as claimed in claim 1, wherein said first physical communication medium is the Ethernet and said second physical communication medium is the Fiber channel. (col. 4, line 65-col. 5, line 10).

Referring to claim 5,

Padovano teaches a computer system as claimed in claim 3, wherein at least one of said second storage devices is a storage device to be accessed by one of said computers according to said first input/output access protocol. (col. 4, line 65-col. 5, line 10).

Referring to claim 6,

Padovano teaches in a computer system configured of a plurality of storage subsystems

(Fig. 3B, elements 302 (SAN server), 304 (NAS server)), a plurality of computers for

transmitting an input/output request and input/output data between said computers

themselves and said storage subsystems through at least one of a first physical

communication medium (Fig. 2, element 208, col. 4, line 65-col. 5, line 10) and a

second physical communication medium (Fig.2, element 116, col. 4, line 65-col. 5, line

10), and a storage management computer being connected with said storage

subsystems through said first and second physical communication mediums and having

a display apparatus (Figs. 2, 3B,4 and element 412).

Padovano also teaches storage subsystems interconnected through said first physical

communication medium and second physical communication medium as well as

storage devices to be accessed by said computers according to a first input/output

access protocol and a second input/output access protocol. (Fig. 3, Fig. 2, elements 116

and 208, col. 4, line 65-col. 5, line 10, col. 13, line 11-18 and line 47-62).

Padovano does not explicitly teach a storage management method executed by

said storage management computer comprising the steps of: obtaining first display

information used for displaying said computers and said storage subsystems

interconnected through said first physical communication medium and their connecting

relation (topology) on said display apparatus; obtaining second display information used

for displaying said computers and said storage subsystems interconnected through said

second physical communication medium and their connecting relation (topology) on

said display apparatus; and obtaining third display information used for displaying a

topology between a first storage device to be accessed by said computers according to a first input/output access protocol. said first storage device being included in said storage subsystems. and said computers. obtaining fourth display information used for displaying a topology between a second storage device to be accessed by said computers according to a second input/output access protocol. said second storage device being included in said storage subsystems. and said computers, obtaining fifth display information used for displaying unused storage devices, obtaining sixth display information for displaying connection between said computers and said first and second storage devices under access limitation. And displaying at least one of said first to sixth display information on the basis of an indication entered into said storage management computer.

Baldwin teaches obtaining display information used for displaying computers and storage subsystems interconnected through said physical communication medium and their connecting relation (topology) (Abstract, Figs. 28-32, para.[0491]-[0499]).

Baldwin also teaches obtaining display information used for displaying unused storage devices, obtaining display information for displaying connection between said computers and said first and second storage devices under access limitation, and displaying at least one display information on the basis of an indication entered into said storage management computer.(Abstract, para.[0022]-[0028]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to enhance Padovano by adding the capabilities of Baldwin such that the network's physical and protocol relationships are displayed as

claimed as it facilitates access to multiple storage devices, e.g., <u>of varied types,</u> from a plurality of servers or other host digital data processors, e.g., <u>running a variety of platforms (different protocols and physical mediums as Padovano employs NAS and SAN)</u> and provides an apparatus for managing administrator-defined and other policies for storage networks, e.g., to facilitate access by multiple hosts to multiple storage devices in a manner consistent with network administrators' wishes and without risk of unwanted access conflicts as taught by Baldwin.

Conclusion

Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-

3972. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Abp
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